

### ABSTRACT OF THE DISCLOSURE

In the method of manufacturing a semiconductor device, via holes and first trenches to form an air gap are concurrently formed in a first insulating film on a semiconductor substrate and a second insulating film is formed thereon.

- 5    Thereafter, the second insulating film lying outside the area corresponding to the regions where the first trenches to form an air gap are formed is partially removed to form trenches for wiring by using a mask. A plurality of wirings are formed by filling in the trenches for wiring with a metal film. The second insulating film remaining in the regions where the first trenches to form an air gap are formed is then removed to form second trenches to form an air gap.
- 10   Subsequently, in forming a third insulating film, air gaps are formed within the second trenches to form an air gap.